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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,717	11/14/2003	Anthony David Williams	030772	2063
26285	7590	08/11/2005	EXAMINER	
KIRKPATRICK & LOCKHART NICHOLSON GRAHAM LLP			NGUYEN, LINH M	
535 SMITHFIELD STREET			ART UNIT	
PITTSBURGH, PA 15222			PAPER NUMBER	
			2816	

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/713,717

Applicant(s)

WILLIAMS, ANTHONY DAVID

Examiner

Linh M. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 July 2005.
2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-16 and 18-20 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 2-16, 18 and 20 is/are allowed.
6) ☒ Claim(s) 19 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 05 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Amendment

This office action is in response to the amendment filed on 07/05/2005.

Claim Objections

1. Claims 16 and 18 are objected to because of the following informalities:

Claim 16, line 4, delete repeated limitation “an analog mixer phase detector;” and

Claim 18, line 1, change “18” to --16—for proper claim dependency.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 19 is rejected under 35 U.S.C. 102(b) as being anticipated by Meltzer et al. (U.S. Pub. No. 2004/0223575).

With respect to claim 19, Meltzer et al. discloses, in Fig. 1, a frequency synthesizer including a voltage controlled oscillator [11], a loop filter [27], and an analog mixer phase detector [13] (*see U.S. Pub. No. 2003/0058961, Fling et al., paragraph [0129], line 1, for the term “PLL mixer/phase detector”*), a method comprising adjusting the voltage applied to the voltage controlled oscillator from the loop filter [27] until the frequency of an output signal of the analog mixer phase detector [13] is within a pass-band of the loop filter [27] by providing a current (*from charge pump in 13*) to a timing capacitor [RC *see details of 27 of Fig. 1 in Fig. 5*] of the loop filter to cause the voltage supplied [output from 27] to the voltage controlled

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oscillator [11] to change based on a time constant [RC see details of 27 of Fig. 1 in Fig. 5) of the loop filter.

Allowable Subject Matter

4. Claims 2-16, 18 and 20 are allowed.

5. The following is an examiner's statement of reasons for allowance:

The closest prior art fails to disclose or fairly suggest:

a) A frequency synthesizer comprising an auxiliary digital frequency detector having an output terminal coupled to a second input terminal of the loop filter, in combination with the remaining claimed limitations, as called for in independent claim 2; or

b) A frequency synthesizer comprising means, coupled to a second input terminal of the loop filter, for making the analog mixer phase detector automatically acquire phase lock when the phase locked loop is out of lock, in combination with the remaining claimed limitations, as called for in independent claim 16.

Remarks

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linh M. Nguyen whose telephone number is (703) 305-0414. The examiner can normally be reached on Alternate Monday and Tuesday to Friday from 5:30 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan, can be reached on (703) 308-4876. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9319 for After Final.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Linh M. Nguyen



**LINH MY NGUYEN
PRIMARY EXAMINER**